

DETAILED ACTION

1. This action is responsive to communications: Amendment filed on 12/30/2009.
2. Claims 15-39 are pending in the case. Claims 1-14 are cancelled. Claims 15, 21, and 26 are independent claims. Claims 15, 21, and 26 have been amended.
3. The rejection of claims 15-25 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement has been withdrawn in view of the amendments.
4. The rejection of claims 15-39 under 35 U.S.C. 103(a) as being unpatentable over Altova Inc. & Altova GmbH, "XML Spy Suite 4.4, User and Reference Manual Version 4.1, copyright 1998-2001, dated May 24, 2002, cover, copyright page, and pages I-XVI, and 1-586, [hereinafter "XML Spy"], in view of Orr (hereinafter Orr, U.S. Patent No. 7,124,357 issued October 2006, further in view of Bosworth et al. (hereinafter Bosworth, "XML, SOAP and Binary Data," published February 24, 2003) has been withdrawn in view of the amendments.

Claim Objections

5. Claims 21-25 are objected to because of the following informalities:

In claim 21 (line 10) the limitation states, "...data field are homogenized data..." which is grammatically incorrect. It is clear that in order for the claim to properly convey its meaning it should be changed to, "...data field are homogenized ~~data~~".

In claim 21 (line 12) the limitation states, "...wherein the homogenized comprises..." which is grammatically incorrect. It is clear that in order for the claim to properly convey its meaning it should be changed to, "...wherein the homogenized data comprises".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 15-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Altova Inc. & Altova GmbH, "XML Spy Suite 4.4, User and Reference Manual Version 4.1, copyright 1998-2001, dated May 24, 2002, cover, copyright page, and pages I-XVI, and 1-586, [hereinafter "XML Spy"], in view of Bosworth et al. (hereinafter Bosworth, "XML, SOAP and Binary Data," published February 24, 2003), further in view of Kusama et al. (hereinafter Kusama, US Patent Number 6,886,131, filed April 12, 2000).

Regarding **independent claim 15**, XML Spy teaches:

A computer readable medium...comprising:

A first data field encoded according to a first format; and

A second data field...second format;

Wherein the first data field and the second data field are homogenized data according to a reference encoding format;

Wherein the reference encoding format defines how to map a sequence of octets into a lexical sequence of Unicode characters;

Wherein the reference encoding format can be generalized to other formats;

Where the reference encoding format can be split into parts;

(See, XML Spy, pages 117-131, 208-209, 303-304, and 551-553, teaching combining data with different encodings and changing the encodings to a single encoding.

Specifically, see, XML Spy, pages 117-131, teaching “encoding,” page 123, “save” and “save as,” page 124, as methods for changing the format of an electronic file to a reference encoding. XML Spy teaches specifically that a default encoding for files could be UTF-8 (a way to map a sequence of octets into a lexical sequence of Unicode characters) (page 303-304 of XML Spy).

See also, XML Spy, pages 208-209, teaching “import text file,” “which lets you import any structured text file into XML Spy and convert it to XML format immediately. This is useful when you want to import legacy data from older systems, as most software products support a text export interface of some kind.” It is inherent that since XML Spy will import any structured text file and convert it to XML format immediately, and since there are more than one form of structured text file, and since files may be combined in XML, that at least two different encodings can be combined as

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homogenized data (i.e. as a single package) in according to the reference encoding – XML.)

See also, XML Spy, pages 303-304, teaching “encoding” where a “default encoding for new files can be pre-determined in the settings dialog box so that each new document is automatically created with a proper XML-declaration” thereby teaching that a plurality of files may be encoded to the same homogenized data according to a default reference encoding.

See also, XML Spy, pages 551-553, teaching that all XML files from formats on a variety of machines and languages, will be homogenized to the reference encoding of Unicode.)

XML Spy does not explicitly disclose that the data is encoded as XML and embedded opaque binary data without losing information, without having to perform character set-to-character set encodings and avoiding data bloat. However, Bosworth explicitly discloses that well-known XML technologies (such as the XInclude mechanism) can be used to create homogenized data encoded as XML and embedded opaque binary data without losing information, without having to perform character set-to-character set encodings and avoiding data bloat (page 6, “Flexibility in Representation, Consistency in Model” of Bosworth). Bosworth also discloses a sequence of fragments, each fragment having a different character encoding, the fragments begging with a header indicating the character encoding (pages 3-4 of Bosworth). Bosworth also discloses a reference encoding format that defines how to map a sequence of octets into a lexical sequence of Unicode characters, which can be

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generalized to other formats and split into parts (pages 3-4 of Bosworth). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of XML Spy with the teachings of Bosworth because it would allowed opaque binary data to be included as a part of an the InfoSet, whilst avoiding the penalties of actually encoding and decoding the data.

Neither XML Spy nor Bosworth explicitly disclose the header of the fragment includes a length of the data in a corresponding fragment. However, Kusama discloses a sequence of one or more fragments, each fragment having a different character encoding, the data fragment begins with a header indicating the encoding and the length of the data in the corresponding fragment (Fig. 12 and 13 and column 12, line 1-column 13, line 32 of Kusama). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of XML Spy and Bosworth with the teachings of Kusama because it would have allowed easy discrimination of binary data registered with meta-data by registering it's size in binary data.

Regarding **dependent claim 16**, XML Spy teaches:

wherein the reference encoding is XML.

(See, XML Spy, pages 117-131, 208-209, 303-304, and 551-553, teaching encoding in Unicode (for XML) and other encodings being all translated to Unicode (XML).

Regarding **dependent claim 17**, XML Spy teaches:

wherein the combined data is encoded into a single XML information set.

(See, XML Spy, pages 117-131, 208-209, 303-304, and 551-553, teaching encoding in Unicode (for XML) and other encodings being all translated to Unicode (XML).)

Regarding **dependent claim 18**, XML Spy teaches:

wherein the combining comprises referring to data using an include element to reference binary data.

(See, XML Spy, pages 6, 123, and 374, teaching the use of ASCII as an accommodated binary code within the invention and within the include codes in the header of the program.)

Regarding **dependent claim 19**, XML Spy teaches:

wherein a href (Hypertext REference) attribute of the include element provides a universal resource identifier of the binary data to be referenced.

(See, XML Spy, page 204, teaching an href to a universal resource identifier (URL).)

Regarding **dependent claim 20**, XML Spy teaches:

wherein the SOAP header block points to any one of a web resource, an audio resource, and an image resource.

(See, XML Spy, pages 115, 188, 295, 379-380, 414, and 436, teaching use of a cache for reloading files with URLs. And see, XML Spy, page 8, teaching that XML Spy will handle graphics as representations of media resources.)

Regarding **independent claim 21**, XML Spy teaches:

XML Spy teaches:

A first data fragment encoded according to a first format - XML and

A second data field...second format - JPEG;

*Wherein the first data field and the second data field are homogenized
data according to a reference encoding format;*

*Wherein the reference encoding format can be generalized to other
formats;*

Where the reference encoding format can be split into parts;

(See, XML Spy, pages 117-131, 208-209, 303-304, and 551-553, teaching combining data with different encodings and changing the encodings to a single encoding.

Specifically, see, XML Spy, pages 117-131, teaching “encoding,” page 123, “save” and “save as,” page 124, as methods for changing the format of an electronic file to a reference encoding. XML Spy teaches specifically that a default encoding for files could be UTF-8 (a way to map a sequence of octets into a lexical sequence of Unicode characters) (page 303-304 of XML Spy).

See also, XML Spy, pages 208-209, teaching “import text file,” “which lets you import any structured text file into XML Spy and convert it to XML format immediately. This is useful when you want to import legacy data from older systems, as most software products support a text export interface of some kind.” It is inherent that since XML Spy will import any structured text file and convert it to XML format immediately,

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and since there are more than one form of structured text file, and since files may be combined in XML, that at least two different encodings can be combined as homogenized data (i.e. as a single package) in according to the reference encoding – XML.)

See also, XML Spy, pages 303-304, teaching “encoding” where a “default encoding for new files can be pre-determined in the settings dialog box so that each new document is automatically created with a proper XML-declaration” thereby teaching that a plurality of files may be encoded to the same homogenized data according to a default reference encoding.

See also, XML Spy, pages 551-553, teaching that all XML files from formats on a variety of machines and languages, will be homogenized to the reference encoding of Unicode.)

XML Spy does not explicitly disclose that the first data is formatted XML and the second data is JPEG or that the data is encoded as XML and embedded opaque binary data without losing information, without having to perform character set-to-character set encodings and avoiding data bloat. However, Bosworth explicitly discloses that well-known XML technologies (such as the XInclude mechanism) can be used to create homogenized data encoded as XML and embedded opaque binary data without losing information, without having to perform character set-to-character set encodings and avoiding data bloat (page 6, “Flexibility in Representation, Consistency in Model” of Bosworth). Bosworth also discloses a sequence of fragments, each fragment having a different character encoding which includes an XML fragment and a JPEG fragment, the

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fragments begging with a header indicating the character encoding (pages 3-4 of Bosworth). Bosworth also discloses a reference encoding format that defines how to map a sequence of octets into a lexical sequence of Unicode characters, which can be generalized to other formats and split into parts (pages 3-4 of Bosworth). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of XML Spy with the teachings of Bosworth because it would allowed opaque binary data to be included as a part of an the InfoSet, whilst avoiding the penalties of actually encoding and decoding the data.

Neither XML Spy nor Bosworth explicitly disclose the header of the fragment includes a length of the data in a corresponding fragment. However, Kusama discloses a sequence of one or more fragments, each fragment having a different character encoding, the data fragment begins with a header indicating the encoding and the length of the data in the corresponding fragment (Fig. 12 and 13 and column 12, line 1-column 13, line 32 of Kusama). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of XML Spy and Bosworth with the teachings of Kusama because it would have allowed easy discrimination of binary data registered with meta-data by registering it's size in binary data.

Regarding **dependent claim 22**, XML Spy teaches:

wherein the reference encoding is XML.

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(See, XML Spy, pages 117-131, 208-209, 303-304, and 551-553, teaching encoding in Unicode (for XML) and other encodings being all translated to Unicode (XML).

Regarding **dependent claim 23**, XML Spy teaches:

wherein the combined data is encoded into a single XML information set.

(See, XML Spy, pages 117-131, 208-209, 303-304, and 551-553, teaching encoding in Unicode (for XML) and other encodings being all translated to Unicode (XML).)

Regarding **dependent claim 24**, XML Spy teaches:

wherein the combining comprises combining data fragments, each data fragment being defined by values corresponding to a respective encoding, length, and content.

(It is noted that the phrase “interleaving data” is not found to be expressly defined in the specification, except from what appears to be a contextual definition of the phrase “interleaved data” as follows: “FIG. 3 refers to the mixed content encoding combination technique, by which data having at least two different encodings is interleaved, i.e., combined, in accordance with a reference encoding.” See, figure 3, and disclosure, paragraph [0046]. Based on the specification and the context of the claims, the Examiner reads the limitation of combining comprising “interleaving data” to mean data which is a block containing more than one encoding, which is then read by the program and combined into one encoding such as Unicode. Such interpretation will be used for the remainder of this Office Action.

See, XML Spy, pages 117-131, 208-209, 303-304, and 551-553, teaching many different encodings singularly or in combination being all translated to Unicode (XML) or other designated encoding. It is noted that XML Spy will translate most encodings into a variety of second encodings, including into Unicode for XML. The character of the original encodings and whether the block of data contains one or more than one encoding does not affect the translation. Additionally, the manner of notation of the data in the first encoding (i.e., “encoding, length, and content”) does not affect the translation and is read as non-functional descriptive language such that it is not limiting on the claimed invention.)

Regarding **dependent claim 25**, XML Spy teaches:

wherein a data fragment is notated as <encoding><length><content>.

(It is noted that the phrase “interleaving data” is not found to be expressly defined in the specification, except from what appears to be a contextual definition of the phrase “interleaved data” as follows: “FIG. 3 refers to the mixed content encoding combination technique, by which data having at least two different encodings is interleaved, i.e., combined, in accordance with a reference encoding.” See, figure 3, and disclosure, paragraph [0046]. Based on the specification and the context of the claims, the Examiner reads the limitation of combining comprising “interleaving data” to mean data which is a block containing more than one encoding, which is then read by the program and combined into one encoding such as Unicode. Such interpretation will be used for the remainder of this Office Action.

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See, XML Spy, pages 117-131, 208-209, 303-304, and 551-553, teaching many different encodings singularly or in combination being all translated to Unicode (XML) or other designated encoding. It is noted that XML Spy will translate most encodings into a variety of second encodings, including into Unicode for XML. The character of the original encodings and whether the block of data contains one or more than one encoding does not affect the translation. Additionally, the manner of notation of the data in the first encoding (i.e., "encoding, length, and content") does not affect the translation and is read as non-functional descriptive language such that it is not limiting on the claimed invention.)

Regarding **independent claim 26**:

Claim 26 incorporates substantially similar subject matter as claimed in claim 15 and, in further view of the following is rejected along the same rationale. Claim 15 does not specify transmitting data to a receiving node, however, transmission of data to a node is inherent in the translation of data to a XML format which is taught in XML Spy, and which is based on hierarchical organization including nodes. All data within XML Spy is within nodes.)

Regarding **dependent claim 27**, XML Spy teaches:

wherein the reference encoding includes at least one of the at least two different encodings.

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(See, XML Spy, pages 117-131, 208-209, 303-304, and 551-553, teaching encoding in Unicode (for XML) and other encodings being all translated to Unicode (XML).)

Regarding **dependent claim 28**, XML Spy teaches:

wherein the reference encoding is XML.

(See, XML Spy, pages 117-131, 208-209, 303-304, and 551-553, teaching encoding in Unicode (for XML) and other encodings being all translated to Unicode (XML).)

Regarding **dependent claim 29**, XML Spy teaches:

wherein the combined data is encoded into a single XML information set.

(See, XML Spy, pages 117-131, 208-209, 303-304, and 551-553, teaching encoding in Unicode (for XML) and other encodings being all translated to Unicode (XML).)

Regarding **dependent claim 30**, XML Spy teaches:

A method according to claim 26, wherein the combining includes resolving to data.

(It is noted that the specification expressly defines the term “resolve” as follows: “*It should be noted that, as utilized within this description, the term “resolve” refers to linking or pointing to referenced data.*” See, disclosure, paragraph [0016]. It is believed by the Examiner based on the context of the definition in the disclosure that the Applicants intended the stated definition of “resolve” to apply to the term “resolving,” as

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used in claim 30, and, accordingly, the term will be so read for the remainder of this Office Action.

It is further noted that the function of “linking or pointing to referenced data” is consistent with the function of “referencing,” which was known to one of ordinary skill in the art at the time of the invention to refer to a reference data type, and was defined as follows: “A data type that is represented by a reference (similar to a pointer) to the type’s actual value. If a reference type is assigned to a variable, that variable references (or ‘points to’) the original value.” See, “Microsoft Computer Dictionary, Fifth Edition,” Microsoft Press, 2002, definition of “reference type.”

Based on the definitions and the use of the terms in context of the claims, the terms “reference” as used in claim 5, is read as having the same function as the term “resolving” as used in claim 30.

Therefore, based on the stated interpretations of the claim language, claim 30 incorporates substantially similar subject matter as claimed in claim 5 and is rejected along the same rationale.)

Regarding **dependent claim 31**, (It is noted that the phrase “interleaving data” is not found to be expressly defined in the specification, except from what appears to be a contextual definition of the phrase “interleaved data” as follows: “*FIG. 3 refers to the mixed content encoding combination technique, by which data having at least two different encodings is interleaved, i.e., combined, in accordance with a reference encoding.*” See, figure 3, and disclosure, paragraph [0046]. Based on the specification

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and the context of the claims, the Examiner reads the limitation of combining comprising “interleaving data” to mean data which is a block containing more than one encoding, which is then read by the program and combined into one encoding such as Unicode. Such interpretation will be used for the remainder of this Office Action.

See, XML Spy, pages 117-131, 208-209, 303-304, and 551-553, teaching many different encodings singularly or in combination being all translated to Unicode (XML) or other designated encoding. It is noted that XML Spy will translate most encodings into a variety of second encodings, including into Unicode for XML. The character of the original encodings and whether the block of data contains one or more than one encoding does not affect the translation.)

Regarding **dependent claim 32**, XML Spy teaches:

A method according to claim 30, wherein the combining includes resolving to data using an include element to reference binary data.

(It is noted that the specification expressly defines the term “resolve” as follows: “*It should be noted that, as utilized within this description, the term “resolve” refers to linking or pointing to referenced data.*” See, disclosure, paragraph [0016]. It is believed by the Examiner based on the context of the definition in the disclosure that the Applicants intended the stated definition of “resolve” to apply to the term “resolving,” as used in claim 30, and, accordingly, the term will be so read for the remainder of this Office Action.

It is further noted that the function of “linking or pointing to referenced data” is consistent with the function of “referencing,” which was known to one of ordinary skill in the art at the time of the invention to refer to a reference data type, and was defined as follows: “A data type that is represented by a reference (similar to a pointer) to the type’s actual value. If a reference type is assigned to a variable, that variable references (or ‘points to’) the original value.” See, “Microsoft Computer Dictionary, Fifth Edition,” Microsoft Press, 2002, definition of “reference type.”

Based on the definitions and the use of the terms in context of the claims, the terms “reference” as used in claim 7, is read as having the same function as the term “resolving” as used in claim 32.

Therefore, based on the stated interpretations of the claim language, claim 32 incorporates substantially similar subject matter as claimed in claim 7 and is rejected along the same rationale.)

Regarding **dependent claim 33**, XML Spy teaches:

wherein a href (Hypertext REFerence) attribute of the include element provides a universal resource identifier of the binary data to be referenced.

(See, XML Spy, page 204, teaching an href to a universal resource identifier (URL).)

Regarding **dependent claim 34**, XML Spy teaches:

wherein the combined data is presented as a MIME serialization.

(See, XML Spy, page 296, teaching translation of MIME serialization data to XML.)

Regarding **dependent claim 35**, XML Spy teaches:

wherein the include element comprises a simple object access protocol (SOAP) header block.

(See, XML Spy, pages 257-273, teaching use of the SOAP protocol in a header block.)

Regarding **dependent claim 36**, XML Spy teaches:

wherein the SOAP header block points to any one of a web resource, an audio resource, and an image resource.

(See, XML Spy, pages 115, 188, 295, 379-380, 414, and 436, teaching use of a cache for reloading files with URLs. And see, XML Spy, page 8, teaching that XML Spy will handle graphics as representations of media resources.)

Regarding **dependent claim 37-39**, XML Spy teaches:

wherein the combining comprises combining data fragments, each data fragment being defined by values corresponding to a respective encoding, length, and content.

(It is noted that the phrase “interleaving data” is not found to be expressly defined in the specification, except from what appears to be a contextual definition of the phrase “interleaved data” as follows: “FIG. 3 refers to the mixed content encoding combination technique, by which data having at least two different encodings is interleaved, i.e., combined, in accordance with a reference encoding.” See, figure 3, and disclosure,

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paragraph [0046]. Based on the specification and the context of the claims, the Examiner reads the limitation of combining comprising “interleaving data” to mean data which is a block containing more than one encoding, which is then read by the program and combined into one encoding such as Unicode. Such interpretation will be used for the remainder of this Office Action.

See, XML Spy, pages 117-131, 208-209, 303-304, and 551-553, teaching many different encodings singularly or in combination being all translated to Unicode (XML) or other designated encoding. It is noted that XML Spy will translate most encodings into a variety of second encodings, including into Unicode for XML. The character of the original encodings and whether the block of data contains one or more than one encoding does not affect the translation. Additionally, the manner of notation of the data in the first encoding (i.e., “encoding, length, and content”) does not affect the translation and is read as non-functional descriptive language such that it is not limiting on the claimed invention.).

In addition,

*A method according to claim 13, wherein a data fragment is notated as
<encoding><length><content>.*

(It is noted that the phrase “interleaving data” is not found to be expressly defined in the specification, except from what appears to be a contextual definition of the phrase “interleaved data” as follows: “FIG. 3 refers to the mixed content encoding combination technique, by which data having at least two different encodings is interleaved, i.e., combined, in accordance with a reference encoding.” See, figure 3, and disclosure,

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paragraph [0046]. Based on the specification and the context of the claims, the Examiner reads the limitation of combining comprising “interleaving data” to mean data which is a block containing more than one encoding, which is then read by the program and combined into one encoding such as Unicode. Such interpretation will be used for the remainder of this Office Action.

See, XML Spy, pages 117-131, 208-209, 303-304, and 551-553, teaching many different encodings singularly or in combination being all translated to Unicode (XML) or other designated encoding. It is noted that XML Spy will translate most encodings into a variety of second encodings, including into Unicode for XML. The character of the original encodings and whether the block of data contains one or more than one encoding does not affect the translation. Additionally, the manner of notation of the data in the first encoding (i.e., “encoding, length, and content”) does not affect the translation and is read as non-functional descriptive language such that it is not limiting on the claimed invention.)

Response to Arguments

7. Applicant's arguments with respect to claims 15-39 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA D. CAMPBELL whose telephone number is (571)272-4133. The examiner can normally be reached on M-F (7:30 AM - 4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Joshua D Campbell/
Primary Examiner, Art Unit 2178
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